



(19)

(11) Publication number: **58161753 A**

Generated Document

PATENT ABSTRACTS OF JAPAN(21) Application number: **57043365**(51) Intl. Cl.: **C22F 1/10**(22) Application date: **18.03.82**

(30) Priority:	(71) Applicant: OTSUKA KAZUHIRO FURUKAWA ELECTRIC CO LTD:THE
(43) Date of application publication: 26.09.83	(72) Inventor: MIYAZAKI SHUICHI OTSUKA KAZUHIRO
(84) Designated contracting states:	(74) Representative:

**(54) MANUFACTURE OF
SUPERELASTIC TI-NI
MATERIAL****(57) Abstract:**

PURPOSE: To remarkably enhance the superelastic characteristics of an Ti-Ni alloy showing superelastic martensitic transformation by cold working the alloy and by heat treating it at a specified temp. or above at which no recrystallization is caused to form a worked structure which is hardly deformed by slip.

CONSTITUTION: A Ti-Ni alloy such as a Ti-49.5W51.5at% Ni alloy or an alloy obtd. by adding 1at% in total of one or more among Fe, Co, Cu, Mn, Cr, V, Zr, Pd and other noble metals to the Ti-Ni alloy is prepared. The Ti-Ni alloy is cold worked and heat treated at $\geq 250^{\circ}\text{C}$, especially $250\text{W}550^{\circ}\text{C}$ without causing recrystallization. Thus, the superelastic characteristics of the superelastic Ti-Ni material are remarkably enhanced. For example, when the heat treated Ti-Ni material is used as a spring material with very high expandability, the range where the material can act as a spring is

extended by about 20 times the range
where a conventional spring material
can act as a spring.

COPYRIGHT: (C)1983,JPO&Japio